DRAFT
TUCSON AMA SAFE-YIELD TASK FORCE
ISSUE OUTLINE
7/13/00

ISSUE: RESIDUAL MUNICIPAL PUMPING

Municipal water providers that are designated as having an assured water supply are allocated a volume of "mined groundwater" and can slowly phase in use of renewable water supplies. The volume of mined groundwater and the long phase in period allows continued groundwater pumping, especially in the short term. However, once this groundwater account is depleted, municipal providers must replenish any continued groundwater pumping. Non-designated municipal water providers have no obligation to use renewable supplies for existing uses although new subdivisions built in their service areas are required to replenish excess groundwater. Although the municipal sector is the only sector with a replenishment obligation through the Assured Water Supply Program, there are concerns about the impact of continued municipal groundwater pumping on achievement of the safe-yield goal.

BACKGROUND

Municipal groundwater pumpage accounted for 43% of the AMA's residual pumping in 1997, over 151,000 acre-feet. The Assured Water Supply program requirements to use renewable water supplies are expected to reduce the municipal sector's residual pumping to 21% of the total or 41,000 acre-feet by 2025.

Municipal providers have service area rights that, unlike other rights, are not quantified by a specific volume. Instead, the volume of water that providers may use is governed by per capita conservation requirements in the management plans. Thus, as the population of a service area grows, the water provider can serve an increasing volume of water as long as it is within the per capita conservation limits. For designated providers, water service must also be consistent with the safe-yield goal, i.e. renewable supplies must be used.

In order to subdivide land, developers must demonstrate an assured water supply. This can be done in one of two ways. The developer can obtain water service from a "designated provider" that has demonstrated an assured water supply for its entire service area or if the development will be served by a provider that is not designated the developer must obtain a certificate of assured water supply. A key component of this demonstration is "consistency with the management goal". This criterion requires that any "excess groundwater" pumped in the service area must be replenished with a renewable supply somewhere in the AMA. However, both designated providers and certificated subdivisions are given a groundwater allocation that allows for the pumping of groundwater that is not subject to replenishment. For designated providers, this volume is approximately 1,900,000 acre-feet and is calculated based on the providers' 1994 water demand. The mined groundwater allocation factor for certificates declines over time to zero after 2025.

Undesignated providers are not subject to any replenishment obligation for their existing customers. Current pumpage associated with these users is 22,000 acre-feet/year. In addition there is about 1,000 acre-feet of additional pumpage associated with unbuilt subdivisions that received certificates prior to the 1995 Assured Water Supply Rules and that are not subject to replenishment. All

subdivisions that received certificates prior to the 1995 Assured Water Supply Rules can continue to use groundwater.

Both certificates and designated providers are allowed to draw on their groundwater allocations while use of renewable water supplies are phased in. All certificate and assured water supply designations in the AMA are based on membership in the Central Arizona Groundwater Replenishment District (CAGRD). Standard contracts with the CAGRD require that a minimum amount must be declared as excess groundwater subject to replenishment. For designated providers and certificates this minimum is 1/30 beginning in 1995 increasing to 20/30 by 2014. Thereafter replenishment is required only for the actual excess groundwater used.

There is concern that the large volume of water in the groundwater allocations and the long phase in of renewable water supplies may create a short-term problem in the use of renewable supplies.

Another municipal groundwater use issue is that one water provider (Arizona Water Company) pumps water inside the Tucson AMA at Oracle Junction, but delivers it both inside and outside of the AMA in Oracle. Because some land being subdivided in Oracle is not in an AMA, an assured water supply is not required. Instead, the much lower standard of water adequacy is applied. This situation allows for increased mining of groundwater in the AMA to serve new users without any replenishment obligation.

SOLUTIONS CONSIDERED

The following ideas have been considered. Additional ideas may be added to this list.

- Consider a requirement that all municipal providers' pre-1995 customer water use would be subject to replenishment. Requiring replenishment would allow private water companies to recover the higher cost of renewable supplies through rate increases which must be approved by the Arizona Corporation Commission. A phased-in replenishment obligation could be developed that would alleviate customer rate shock.
- Restructure the member service area CAGRD contracts so that the minimum volume of mined groundwater in the provider's groundwater account that is subject to replenishment is increased.
- Encourage providers to use renewable supplies as early as possible (while they are available and cheaper) and save groundwater supplies for later.
- Require that part of the groundwater allocation be preserved for CAP drought protection.
- Through a legislative change, require that land being subdivided outside an AMA that is served water from wells within an AMA demonstrate an assured water supply based on requirements for the AMA.

PRELIMINARY RECOMMENDATIONS:

- Investigate the feasibility of requiring non-designated water providers to phase-in the use of renewable supplies for pre-1995 customer water use in their service areas. This would likely involve a replenishment obligation that would ramp up, with an ultimate obligation similar to that for designated water providers. Part of this investigation would include an analysis of the necessary legal mechanisms that would ensure that private water companies subject to rate review by the Arizona Corporation Commission could pass through the costs of renewable supply use/replenishment to their customers.

- Investigate the CAP drought protection needs of designated water providers as they relate to the mined groundwater account volume including the implications of requiring that part of the designated provider's account be preserved for drought protection. Investigate how this potential requirement relates to the drought protection provisions of the Arizona Water Banking Authority.
- Through a legislative change, require that land being subdivided outside an AMA that is served water from wells within an AMA demonstrate an assured water supply based on requirements for the AMA.

OBSERVATIONS

There are several issues associated with these recommendations. One issue is the volume of water that would be reasonable to set aside for drought protection. If the volume of water that must be "saved" for drought protection is relatively small there would be little effect on residual groundwater pumping. The Groundwater Code and/or the AWS rules would need to be amended to require that all providers use renewable water supplies or to modify the mined groundwater account provisions. There could be serious concerns about any contract changes and any attempt to preclude use of a portion of the mined groundwater account. Designated providers with little or no demand in 1994 have very small groundwater account volumes and thus virtually no water to "save" for drought. How to provide drought protection for these providers (beyond that provided through the Arizona Water Banking Authority), is a concern.

Because of the AWS program, the municipal sector is the only sector subject to mandatory replenishment. This program is the major tool in achieving the safe-yield goal and requires substantial economic investment. Because of this there are equity issues between designated and non-designated providers and between the municipal and the other water use sectors.